IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) A robot apparatus for performing autonomous motion based on inner states [[or]] and external stimuli, comprising

expression means~~, having a plurality of expressive units, for independently and orthogonally~~ for producing a plurality of expressions ;

wherein the expression means comprises a plurality of expressive units which are capable of producing on a time axis a plurality of orthogonal expressions which are independent of each other,

wherein the plurality of orthogonal expression comprises feeling classes, feeling intensity, and states of perceptual recognitions,

correlating means for correlating a plurality of orthogonal states, which are based on said inner states [[or]] and external stimuli, with at least one of said plurality of expressive units; and

~~performing one or more reflective behaviors based on external stimuli;~~

~~determining that the one or more reflective behaviors are associated with a single schema; and~~

control means for controlling said expression means for representing the plural orthogonal states in parallel, using the correlated expressive units~~ and the one or more reflective~~

~~behaviors~~.

2. (Previously Presented) The robot apparatus according to claim 1 wherein said control means control said expression means using one or more of the expressive units having parameters variably controlled responsive to each expressive element of said inner states.

3. (Currently Amended) The robot apparatus according to claim 1 wherein said expression means ~~includes~~ comprises a light radiating device and wherein the plural expressive units, capable of orthogonal expressions independently of one another, ~~include~~ comprise two or more of color hue, saturation, intensity and patterns of light emission.

4. (Previously Presented) The robot apparatus according to claim 3, wherein the robot apparatus has an appearance simulating an animal, and wherein said light radiating device is provided at a location corresponding to an eye of the robot apparatus.

5. (Currently Amended) The robot apparatus according to claim 1 wherein said expressive means ~~includes~~ comprises an uttering unit and wherein the plural expressive units, capable of producing orthogonal expressions ~~independently~~ independent of one another, ~~include~~ comprise two or more of the sound pitch, sound volume and rhythm.

6. (Currently Amended) The robot apparatus according to claim 1

wherein said correlating means outputs said correlation by control commands having [[a]] different priority ~~rating~~ ratings;

wherein upon issuance of plural control commands, having [[a]] different priority ~~rating~~ ratings, prioritizing the control command having a higher priority rating.

7. (Currently Amended) A robot apparatus for selecting and executing at least one of a plurality of motions, comprising:

~~expression means, having expressive units variably controlled by a parameter; for producing a plurality of expressions;~~

expression means for producing a plurality of expressions;

command issuing means for issuing a control command on motion selection,

wherein said control command ~~being a command in which~~ has a priority rating and correlates said expressive units ~~are correlated~~ with the selected motion; and

~~means for performing one or more reflective behaviors based on external stimuli;~~

~~means for determining that the one or more reflective behaviors are associated with a single schema; and~~

control means for controlling said expression means by said control command; ~~said control command having a priority rating;~~

wherein ~~said control means on~~ upon issuance of plural control commands having [[a]] different priority ~~rating~~ ratings ~~controlling~~ said control means controls said expression

means in accordance with the control command having a higher priority rating, ~~and the one or more reflective behaviors.~~

wherein when a plurality of commands have the same priority ratings, information showing orthogonal expressions are set independently so that a plurality of orthogonal states are expressed in parallel.

8. (Currently Amended) The robot apparatus according to claim 7

wherein, if a first control command having a higher priority rating than a second control command currently controlling the expression means is issued, said control means interrupts the expressions to control the expression means in accordance with the first control command having a higher priority rating.

9. (Currently Amended) The robot apparatus according to claim 8

wherein said control means re-initiates the interrupted expressions when the expression related to the first control command having a higher priority rating ends.

10. (Currently Amended) The robot apparatus according to claim 7

wherein said command issuing means further comprises:

a plurality of behavior stating modules stating the motions of a robot body;

wherein when one of the behavior stating modules is selected, the selected behavior stating module issues a third control command having a priority rating that matches the motion of the robot body.

11. (Previously Presented) The robot apparatus according to claim 10 wherein a control command issued by the behavior stating module selected on the basis of a command from outside the robot has a higher priority rating than a control command issued by the behavior stating module selected on the basis of an inner state of the robot or a state of recognition.

12. (Currently Amended) The robot apparatus according to claim 7

~~wherein said expression means include plural orthogonal expressive means.~~

wherein the expression means comprises a plurality of expressive units which are capable of producing on a time axis a plurality of orthogonal expressions which are independent of each other,

wherein the plurality of orthogonal expression comprises feeling classes, feeling intensity, and states of perceptual recognitions.

13. (Currently Amended) A method for expression by a robot apparatus capable of performing autonomous motions based on inner states [[or]] and external stimuli, said method comprising:

correlating a plurality of orthogonal states, which are based on said inner states [[or]] and external stimuli, with at least one of a plurality of expressive units, which are owned by expression means and which are capable of producing on a time axis a plurality of orthogonal expressions which are independent of each other and ~~being orthogonally expressed independently of one another~~;

~~performing one or more reflective behaviors based on external stimuli;~~

~~determining that the one or more reflective behaviors are associated with a single schema; and~~

controlling said expression means for representing the plural orthogonal states in parallel, using the correlated expressive units ~~and the one or more reflective behaviors.~~, and

wherein the plurality of orthogonal expressions comprise feeling classes, feeling intensity, and states of perceptual recognitions

14. (Currently Amended) The method ~~for expression by a robot apparatus~~ according to claim 13, further comprising:

controlling said expression means by expressive elements,

wherein the parameters of the expression means are variably controlled responsive to respective expressive elements of said inner states.

15. (Currently Amended) The method ~~for expression by a robot apparatus~~ according to claim 13 wherein,

the correlation step further comprises:

outputting the correlation by control commands~~, the control commands~~ having a priority rating; and

prioritizing the control command having a higher rating.

16. (Currently Amended) A method for expression by a robot apparatus in which at least one of a plurality of motions is selected and executed, said method comprising:

a command issuing step of issuing, on motion selection, a control command in which an expressive unit variably controlled by a parameter and owned by expression means is correlated with the selected motion;

~~performing one or more reflective behaviors based on external stimuli;~~

~~determining that the one or more reflective behaviors are associated with a single schema; and~~

~~a control step of~~ controlling said expression means by said control command[[;]], and

wherein said control command ~~having~~ has a priority rating;

wherein upon issuance of plural control commands having different priority ratings said control means controls said expression means in accordance with the control command having a higher priority rating,~~said expression means being controlled in said control step by a control command having a higher priority rating and the one or more reflective behaviors.~~

wherein when a plurality of commands have the same priority ratings, information showing orthogonal expressions are set independently so that a plurality of orthogonal states are expressed in parallel.

17. (Currently Amended) The method ~~for expression by a robot apparatus~~ according to claim 16

wherein if, ~~in said control step,~~ a first control command having a higher priority rating than the second control command currently controlling said expression means in the expressing operation is issued, the expression is interrupted and the expression means is

controlled by the first control command having the higher priority rating.

18. (Currently Amended) The method ~~for expression by a robot apparatus~~ according to claim 17

wherein~~, in said control step,~~ the interrupted expression is re-initiated when the expression corresponding to the first control command having a higher priority rating ends .